



Vice President and Editor in Chief Melina Gerosa Bellows Executive Editor Julie Vosburgh Agnone Design Director Jonathan Halling Special Projects Editor Rachel Buchholz Science Editor Catherine D. Hughes Senior Editor Robin Terry

Photo Jay Sumner, Photo Director; Karine Aigner, Senior Editor; Kelley Miller, Editor Art Eva Absher, Associate Design Director; Nicole M. Lazarus, Associate Art Director; Julide Obuz Dengel, Art Production Assistant Writer-Researchers Erin Taylor Monroney, Eleanor Shannahan, Sharon Thompson Administration Jill E. Yaworski, Editorial Assistant;

Tammi Colleary, Business Specialist Production David V. Showers, Director Online Anne A. McCormack, Senior Editor Manufacturing Robert L. Feige, Vice President, Production Services; Gregory Storer, Director; Robert L. Barr, Project Manager PUBLISHED BY THE NATIONAL GEOGRAPHIC SOCIETY

President and CEO John M. Fahey, Jr. President, Global Media Tim Kelly President, Publishing John Q. Griffin Chairman, Board of Trustees Gilbert M. Grosvenor

Senior Vice President and Group Publisher Stephen P. Giannetti Marketing Director Dana C. Deighton

Marketing Manager Allie Carroll Business Manager John J. Patermaster, Jr. Consumer and Member Marketing Lori Rainford New Rusiness Director Mark Viola, Renewals and Planning Director: Suzanne Mackay, Renewals Manager Market Services Tracy Hamilton Stone,

Research Manager Advertising Production Debra Schwartzberg, Production Project Manager Contract Manager Mike Portillo Publicists Caryn Davidson,

Ethan Fried (202) 857-7037 Advertising Offices: Jeff Nicholson, Advertising Director (212) 610-5554; East Coast Kathy Nontasak (212) 610-5507. Erin Switzer, 212-610-5549;

Southeast Ken Farber (770) 391-9905; Midwest Greg Clements Media, Inc. (312) 255-0224; West Coast Denise Schipper (310) 774-1840

NATIONAL GEOGRAPHIC KIDS (ISSN 1542-3042) is published ten tim year by the National Geographic Society, Washington, DC 20036. Peri-odical postage paid at Washington, DC, and additional mailing offices. orical postage paid at Mastington, Uc, and additional maining office; DPSTMSTEE 5 and address changes to NATIONAL GROUNDAINE (IXIS, MI). Box 69,002, lampa, FL 3569–3002, Subscriptions: United States, 1993; Canada, 53,99; in U.S. funds. United States and Its outlying areas; \$34,00 for two years; Canada \$5,599 in Canadin funds or \$4,199 in U.S. funds. Single copy: United States, \$4,99, Canada, \$599 in Canadin funds or \$7,591 in U.S. funds. (includes postage). In Canada, Agreement number 40063649, return undelverable Canadian addresses to NATIONAL GEOGRAPHIC KTDS, PD. Box 4412 STA A, Toronto, Ontario MSW 3W2.

The submission of photographs and other material to NATIONAL GEOGRAPHIC KIDS is done at the risk of the sender; NATIONAL GEOGRAPHIC KIDS cannot accept liability for loss or damage.

NATIONAL GEOGRAPHIC KIDS magazine's numerous honors include MATIONAL GEOGRAPHIC KIDS INSIGNING S INJURIED S ROOMS INCIDE EPPress 2005 and 2006 Periodical of the Year, a Golden Lamp Award, a Parents' Choice Gold Award, a Parent's Guide Chil-dren's Media assard, the Folice Editorial Excellence. Award, and an Ozzie Assard for Design Excellence.

SUBSCRIBE TO NATIONAL GEOGRAPHIC KIDS! **CALL TOLL FREE 1-800-NGS-LINE** 1-800-647-5463 (TDD: 1-800-548-9797) MON.-FRI., 8 A.M.-MIDNIGHT ET, SAT., 8:30 A.M.-7 P.M. ET ription to Narzonal Geographic Kass, send writt ame, address, zip code, and payment in U.S. fun-

NATIONAL GEOGRAPHIC KIDS, P.O. Box 63001 TAMPA, FL 33663-3001 For gift subscriptions, send giver's name and address as well as recipient's.

> NATIONAL GEOGRAPHIC

Inside

Undersea Safari 12-27

p. 12

Come face-to-face with awesome sea creatures and discover amazing ocean fun facts on this around-the-world adventure.



Guest Editor Ben Stiller! The star of next month's Night at the Museum: Battle of the Smithsonian aets

you ready for this underwater expedition. and reveals how you can protect the oceans.



1 North Atlantic Ocean 14 Witness a bottlenose dolphin rescue at your first stop

² Caribbean Sea Snorkel in a colorful coral reef off the coast of Belize.

3 Indian Ocean 18



Cruise in waters where leatherback sea turtles swim.

Western Australia

Visit the coast to spot the world's biggest species of



5 Antarctic Waters

Bundle up to go ashore in the land of the emperor penguin.



6 North Pacific Ocean Hang out with a group of sea otters floating in a kelp forest



7 Arctic Ocean 26

Listen to the mysterious songs of beluga whales.



Departments

- **Weird But True**
- **Cool Inventions** Guinness World Records
- Bet You Didn't Know **Just Joking** 10 Amazing Animals
- 28 Fun Stuff What in the World?





Just for KIDS online!

Go online to watch whale shark videos, compete in the Great Turtle Race game, and meet

marine ecologist Enric Sala and other NG explorers! kids.nationalgeographic.com

On the Cover

Bottlenose dolphins are naturally playful and often leap out of the water. COVER PHOTOGRAPH © DOUG PERRINE / SEAPICS.COM

COME MARTS. ALLOY PROTORDAMY / YEE 1000, O BOSS PHEW ARROYS FIRST, MICHAEL MALERS STOCKARD MARTILL STALLER, PAGE 2. RESECCA MALE / NO STAFF (DOCLARD FOR MANDESSORE) SOURHWESTE, EATH, MANDESSORE SOURHWESTE, EATH, MANDESSORE SOURHWESTE, STATE, MANDESSORE SOURHWESTE, STATE, BOSS AND CHRISTING SOURHWESTE. SOURHWESTE, OR SHARP / MANDES PRAISES SEA THETTLE OR GARFIEL / OCCANNOLOMASS SWALL SHARP, OR GREAT DROMMAN / CORRESPONDED.

PROMINGE, OR SHARP MANDESS ALARDAMY CORRESPONDED. OR HINDEN MANDESS SEA THE TITLE OR ANY RELLOY STAFF OR SHARP SHARP MANDES ALARDAMY CORRESPONDED. OR SHARP MANDESS ALARDAMY CORRESPONDED.



Check out these 10 outrageous facts.



MESSAGES
FROM YOUR
BRAIN TRAVEL
ALONG YOUR
NERVES AT UP
TO 200 MILES
AN HOUR.



DOLPHINS CAN HEAR SOUNDS UNDERWATER THAT ARE 15 MILES AWAY.



Some salamanders can regrow their tail, legs, and even parts of their eyes.

The world's largest pizza was

122 Teet. 8 inches across

and weighed

as much as two male African elephants. NEVER CUT YOUR HAIR,

IT COULD GROW MORE THAN 30

FEET IN YOUR LIFETIME—
LONG ENOUGH TO REACH FROM A THIRD-STORY WINDOW TO THE

TR YOU TRAVELED AT AT THE SPEED OF LEIGHT, YOU I COULD REACH PLUTO IN JUST FOUR HOURS.

The first pubble gum nade in 1906, was called "Blibber"



ABOUT
THOUSAND
OF THE
CELLS IN
YOUR BODY
COULD FIT ON
THE HEAD



SUPERFAST SHOES

Need to get somewhere in a hurry? Then strap on a pair of Motorshoes. These motorized, battery-powered shoes can reach speeds of 15 miles an hour. You can zoom around for several miles on a single charge. Control your speed with a finger touch pad, and when you want to stop, use the Motorshoes' built-in brakes. Once these three-wheeled skates are available, you can cruise around park paths or play racing games with your friends. Set up some cones on a basketball court or other concrete surface and you're off!



TALKING PET BOWL

Even if you can't be home to keep your pet company, your voice can be there. With the ChatterBowl, you can be sure Fido hears a message from his best friend: you! Just speak into

the ChatterBowl's removable TalkBox to record your voice. A sensor in the TalkBox replays your message whenever your pet comes near the bowl to eat or drink. And you can change message as often as you like. You can also get a second TalkBox (without the bowl) to put inside your bedroom doorway; If your sister tries to solve the top you like. You can also get a second TalkBox is the tries to you have here you can also get a second TalkBox of with the your sister flying to your sister flying the your sister. If you was the your sister flying the your sister flying the your sister? Inhablewo-bowl!

VIDEO PHONE

If you can't wait for your friends to see your new necklace or the latest addition to your bug colection, the Grandstream Videophone is just what you need. The phone has an auto-focusing camera that transmits real-time video of everything in its view. That way when you phone your friends, you can do more than tell them about your new stuff—you can show them. The Grandstream even telts you transmit the picture to a TV. So when you phone your grandparents to perform that new to routine from dance class, make sure

their videophone is hooked up to their 60-inch plasma television. After all, a big star like you should be on the biggest screen possible. ALL IMAGES DIGITALLY COMPOSED, MOTORSA CONTECH, INC. ICHATTERBOWLI, ® LEW ROB BASED ON THE MAJOR MOTION PICTURE





Join Coraline in her thrilling adventure through two distinct worlds filled with unique characters and fun mini-games.







In Stores New

FOCUS





PlayStation 2

NINTENDO DS



Guinness World Records

BIG BUNNY

How long is Amy the rabbit? She's so big-two feet eight inches from the tip of her nose to the end of her tailthat she sleeps in a dog kennel, Each day the longest rabbit on record eats a bowl of rabbit food. two apples, several carrots, hay, and half a cabbage. She may have a big appetite, but she's a picky eater. Amy won't eat her carrots unless the stems are still attached.





lake. Your car might be your boat—and more! The Rinspeed sQuba holds the record for the first fully submersible car. Drive it into the water and it floats is battery powered, so you get a zero-emission ride.

Photographers may have needed a special lens when the woman with the longest recorded legs met the shortest-known man who can walk. At four feet four inches long, Svetlana Pankratova's legs are nearly twice as tall as two-foot-five-inch He Pingping. The man surprises many people by leading a normal life despite his small size: He runs a restaurant and drives a car. Pankratova, though, surprised no one when she did what a lot of tall people do: She played basketball in school.



WOULD RECORD!

SENDUS OLD JEANS!

IT TAKES ABOUT 500 PAIRS OF JEANS

US LOTS!

ELP US CREATE THE WORLD'S LARGEST COLLECTION OF CLOTHES TO RECYCLE.

UltraTouch

Jeans will be donated to "COTTON." FROM BLUE TO GREEN." This denim drive recycles jeans into UltraTouch insulation, which is

UltraTout insulation, which is used to help build houses in used to help build houses in place that have been damaged by flurricanes, tornadoes, and other natural disasters. Your jeans will help set a record, keep clothes out of landfills, and build homes for families to live in!

FOLLOW THESE RULES TO HELP US CREATE THE LARGEST COLLECTION OF CLOTHES TO RECYCLE.

- Get a parent's permission and select as many denim jeans
- The denim must be used.
- The denim must be used.
- The denim can be any color or size but must have been worn by a human.
- NG KIDS/Set a Guinness World Record
- Washington, DC 20090-8001

NG KIDS/Set a Guinness World Record

Washington, DC 20036

JEANS MUST BE RECEIVED

BY JUNE 30, 2009.

Go online for weekly updates on the number of jeans we have! kids.nationalgeographic.com

Submissions become the property of the National Geographic Society, and all rights thereto are transferred to the National Geographic Soci

HELP US KEEP COUNT BY INCLUDING THIS FORM WITH EACH PACKAGE!

Parent/quardian's name (please print)

Adult leader's name and organization (for school drives, Scouts, etc.)

City/State

Number of denim items in this package



Bet you KNOW

7 fetching facts about **dogs**

1 _{The} Chihuahua

dog's NOSE

Print is as
unique as a

is the world's **Smallest**dog breed.

human fingerprint.

The Basenji, a dog from Africa, yodels instead of barks.

George
Washington
had a Dalmatian
named
Sweetlips.

Miniature
schnauzer-poodle
mix is called a
Schnoodle.

the Neapolitan
mastiff gave
birth to 24
puppies
in one litter.

You can buy

a diamond
dog collar
for about
3 million
dollars.

APRIL 2009







searching for Mozart in 18th-century Austria out a mischievous little boy puts their search on hold when he lets the animals out of the palace zoo.

Log on to www.mthmusical.com for more information about the Magic Tree House Musical!



www.magictreehouse.com

Amazing Animals WAIT TO WEAR MY FLIP-FLOPS AT THE BEACH.

PIG N BOOTS!

Thirsk, England

Most pigs love wallowing in the mud. Not Cinders the pig. As a piglet, she refused to walk in mud, sometimes even shaking with fear if she couldn't find a way around a puddle. The solution? Boots!

Owner Andrew Keeble found that doll size boots were a perfect fit for Cinders. Each day, she'd run to have them put on, then trot happilly through the mud. The boots solved the problem but didn't explain her strange actions. Veterinarian Bruce Lawhorn of Texas ASM University thinks: It might have been a behavioral response. "If Cinders had sore hoof pads while walking in mud, she might have associated the pain with the mud," he says.

Cinders has outgrown her boots and now braves the mud barehoofed. But she still doesn't roll around in it. Getting dirty just isn't this pig's idea of a good time.



A pig's funny-looking snout helps the animal dig.



CAT TAKES TRIP

Palm Beach Gardens, Florida

When Gracie Mae the cat spotted an open suitcase, she did what many cats do: She hopped inside and burrowed under the clothes. Never realizing she was inside, owner Seth Levy closed the suitcase and headed to the airport. That's when Gracie Mae's adventure began. Still in the suitcase, the cat went through an x-ray machine and into the plane. She flew from Florida to Dallas, Teas, then shot down the ramp into baggage claim, where the wrong passenger picked up the suitcase. Finally, nine and a half hours later, a hungry, cranky Gracie Mae escaped—to the surprise of the other passenger, who quickly called Levy's wife, Kelly, "She was back to her affectionate self the next day," she says. These days, Gracie Mae flies in a carrier. After her adventure, she must feel as if she's flying first class.



One legend says that a unicorn's horn neutralizes poison.

REAL-LIFE UNICORN?

Prato, Italy

Ever seen a unicorn? At the Center of Natural Sciences, a naturer essree in Italy, you just might. The creature is actually a roe deer with a rare, single "horn" growing from the center of its head Most male roe deer have two short antlers. A roe deer is occasionally born with just one antler, but it usually grows on the side of fits head. That's what makes this deer, nicknamed Unicom, so unusual. Experts say a genetic flaw may be responsible for the single antler's placement. They also think that deer similar to this one could explain the unicorn myth. This unicorn doesn't have magical powers, but he definitely looks as if he could.



GO ON AN ERSEA SAFARI H GUEST

INTERVIEW BY RACHEL BUCHHOLZ

In next month's movie Night at the Museum: Battle of the Smithsonian, Ben Stiller plays Larry, a guy who's trying to save the world from an evil pharaoh brought back to life by a magic tablet. In real life, Stiller really does want to save the world, and one way to do that is to protect the oceans. That's why he's the guest editor for this month's Special Oceans Issue. You'll board an imaginary submarine and go on an underwater safari to meet sea otters, penguins, and other cool creatures. Need more inspiration to save the oceans? Check out his interview with NG KIDS. NATIONAL GEOGRAPHIC KIDS: Why is it important to protect the world's oceans?

BEN STILLER: Oceans are such an important part of our environment. A healthy Earth depends on healthy water. How we live really affects the entire planet-including oceans—because all the ecosystems are connected. So we have to take care of the planet.

NGK: There's another reason why oceans are special to you.

NGK: What do you like most about diving?

to explore a world that's so different from ours.

NGK: In the movie, you're chased by a giant squid. Have you ever seen a squid while scuba diving?

BEN: No. but I've seen lots of eels and some sharks. That was intense!

NGK: If you could be any water animal, what would it be? BEN: A blue whale. It would be wild to see what they see when they dive deep. Amazing creatures like blue whales are another reason to protect the world's water.

NGK: When you're scuba diving, or just at the beach or a lake, what do you do to protect the water?

EN: It's mostly common sense, like not leaving anything behind and throwing away your trash.

BEN: Yes, I'm a scuba diver. BEN: It's like you're floating in space. And it's incredible

NGK: Anything else?

NGK: We also shouldn't feed or touch the ani-

mals. We're just quests.

BEN: Right. It's their place.

NGK: Are there things

you do at home to conserve water?

necessary.

BEN: Just remember that everything we do affects the environment, and that includes water. So we have to treat the planet well-even if you're just turning of the lights when you leave a room.

BEN: Yes! I make sure to turn off the faucet when I'm

brushing my teeth. And this one's fun: Flush only when

6

NGK: Can kids really make a difference?

BEN: Kids have a lot of power. Adults pay attention when kids do things like recycle or conserve water, because it makes us see how much we should be doing ourselves. So show the adults the way it should be done!

NGK: Why is it important to work together?

BEN: We all have to do our part. If every person does something to make a difference, then the whole world ends up making a difference.

NGK: We have another way to make a difference. We want kids to send in their old jeans to set a Guinness World Record for the largest collection of clothes to recycle.

BEN: I love that idea. Everybody has a pair of worn-out, holey jeans, so this is a great way to recycle them instead of having them end up in a landfill, Just one thing, though, NGK: Yes?

BEN: I have to donate the first pair!





0

CENTINES BY ODISDIN BOYER

BOTTLENOSE DOLPHINS

s you pull out to sea, a half dozen boats buzz slowly around something in a marshy area. You zoom the periscope's view for a better look. It's a young bottlenose dolphin, and it has something stuck around its neck!

The boats belong to a variety of agencies that all share one goals to save the dolphin from her choking trap. One boat unravels a net behind it and circles the animal. The other boats creep in, urging the bottlenose to swim into the net. Contact! Biologists grab the dolphin and ease her onto floating mats, where they snip the debris—an old rubber strap—from around her neck. After a quick checkup by veterinarians, they release the animal. She darts away without looking back, no doubt releved to finally be free from that strangling debris.

Tit's the worst case I've ever seen of this type of entanglement," asys stem of this type of entanglement," asys stem of this a biologist with the National Oceanic and Anthon Stem of the Company of the

that washes off beaches or falls from boats.
As you head for the open ocean and your next destination, Litz's tips for cutting down on marine debris stick with you. "Stash your trash at the beach," she says. "Secure anything on your boat that may fly off."

>> I M

- R U ON SUB YET?
- YEAH. WATCHED DOLPHIN GET RESCUED.
- FROM WHAT?
- FROM WHAT:

MORE CAREFUL.

- TRASH IN SEA CAUGHT AROUND NECK.
- ILL OIL.
- GROSS.

 SERIOUSLY, PEOPLE SHOULD B



000000



MORE ABOUT



IS IT A BIRD? A

PLANE? It's a flying fish! Common in the Atlantic Ocean, flying fish don't really fly. Instead, they build up speed underwater then burst through the surface. gliding through the air on their winglike fins. They usually glide between 100 and 160 feet.



HIKING THESE MOUNTAINS.

The Mid-Atlantic Ridge—seen in the middle of this satellite image—stretches 10,000 miles under the Atlantic. It's longer than the Himalaya, the Andes, and the Rockies combined.



IN THE DEEP North Atlantic, a viperfish with long, needle-like teeth waits for prey. Fish in the pitch-black waters may not see its fearsome fangs. It's the perfect trap.



YOU'LL BE AMAZED at how

massive the schools of fish are as you cruise through them in your submersible. Scientists once spotted a school of more than ten million herring—the size of 11,500 football fields—off



Scientists think there might be more than 250,000 microorganisms in one glass of seawater.

ucky you! You've discovered sunken treasure off the shore of the small Caribbean country of Belize. Just below the surface of the water, miles of vivid corals shoot off in fantastic shapes that shelter tropical fish of every color. You strap on your mask, exit your submersible, and begin exploring the second largest coral reef system in the world.

Often called the rain forests of the sea, reefs account for a quarter of all life in the ocean. "Reefs are undersea cities," says Nancy Knowlton, who studies corals for the Smithsonian Institution. "They're like big apartment complexes for all the fishes, shrimps, clams, and other organisms that live there." The tiny corals create a tough limestone skeleton to live in. The structures you see are the skeletons of thousands of coral polyps piled up over the centuries. You swim carefully; one clumsy kick can destroy decades of coral growth.

Corals invite algae roommates into their limestone homes to help them survive. It's the algae that produce the reef's vivid colors. The algae convert sunlight to food for the corals, which in turn nourish the algae with their waste. But this delicate relationship is vulnerable to the slightest changes in global climate and ocean health. A jump of even two degrees in water temperature makes the coral rid itself of the algae, leaving the coral with a sickly bleached look. Pollution is another threat: it can poison the sensitive corals. It's alarming: "We've lost 80 percent of the living coral in the Caribbean in the last three decades." Knowlton says. Reefs act as an earlywarning system: If something's wrong with the coral, the rest of the ocean could be in peril.

>>IM

- GLUB, GLUB,
- SICK? NO. SNORKELING ON A
- HUMONGO REEF
 - AWESOME. ANY THREAT TO SEA LIFE THERE?
 - POLLUTION & GLOBAL WARMING KILL CORAL, BUT STILL SAW LOTS OF FISH.
 - COOL!



MORE ABOUT



LOOK OUT! Tornadoes that occur over water, such as this one in the Caribbean Sea, are called waterspouts. Creating surface wind speeds between 45 and 200 miles an hour, these dangerous natural phenomena have been known to capsize large boats.



IT'S AMAZING

how you can see creatures such as this manta ray from so far away in the Caribbean. There is a reason the water is so clear: less plant life. On a sunny day, it's possible to see 150 feet down.



STAY AWAY

from the Portuguese man-of-war. It looks like one animal, but it's actually a colony of tiny organisms that create a predator with a very painful sting.



WHEN THIS queen angelfish was young, it may have worked as a "cleaner." Larger fish such as groupers line up at "cleaning sta-tions," where the small queen angelfish latch onto the host fish's skin or swim into their mouths to devour tasty parasites.



you may spot a never-before-seen fish. Researchers estimate that around 4,000 species of ocean fish have yet to be discovered.

heck out the titanic turtle cruising just ahead of the sub. Whoosh! The mysterious creature zooms into the deep. You've just been left in the wake of a leatherback turtle, the world-champion swimmer of the turtle family. Up to nine feet long and weighing up to a ton, it's the largest, most well traveled, deepest diving of all the sea turtles, and one of the fastest. It even has its own annual race.

Inspired by the leatherback's ability to cover great distances with relative ease, turtle researcher George Shillinger co-created the Great Turtle Race, a yearly event that tracks leatherbacks as they migrate. "They're masterful swimmers," Shillinger says of these reptiles. "They just kind of amble along, but if they feel threatened or simply decide that they just want to hustle, they can really move!" One named Billie won the 2007 turtle race after swimming more than 500 miles, at times more than 31 miles a day. That would be like you running a marathon every 24 hours!

Before they grow up to be racing stars, though, leatherbacks have it rough. Babies hatch in nests on a sandy beach and scram-ble madly into the surf under assault from predators in the air and on land. Scientists restaurs in the air and on land. Scientists figure only about one in a thousand hatchlings survives to become an adult. With the species severely threatened by entanglement in fishing nets and from eating plastic trash, every successful by the second control of th makes it to adulthood is one lucky survivor.

>>IM

- WUZZUP?
- M SAW TURTLES RACE!
- **LEMME GUESS. THREAT TO** TURTLES...SWIM TOO SLOW?
- LOL, NO. TRASH, FISHING NETS. SIGH.
 - CHEER UP. HOW CAN UR BFFS LIKE ME HELP?
- TELL EVERYONE TO CHECK OUT TURTLE RACE ONLINE HERE kids.nationalgeographic.com

7777



YOU SEE WHAT LOOKS STRANGELY LIKE AN ELEPHANT floating gently along in the Indian Ocean. The dugong, known as the "sea ele-phant," is a plant-eating mammal that carries its baby around on its back and sometimes stands on its tail in shallow water

to peek its head out.



ATCH OUT FOR THIS DANGER ZONE. The Indian Ocean is known for giant waves called tsunamis, which are usually caused by underwater earthquakes. They can cause coastal sea levels to rise a scary 30 feet or more.



YOU'RE FACE-TO-FACE with a dinosaur! Well, almost. Scientists were shocked to find the coelacanth (SEE-lah-kanth), a fish thought to have become extinct 65 million years ago, living



YIKES! You see a seven-foot-long hammer-head shark hunting for stingrays along the ocean floor. The hammerhead's widely spaced eyes give it a better range of view than other sharks, perfect when searching



OUR OCEANS is that they may take care of us. Scientists are constantly discovering new medicines from the ocean—from compounds in sponges that help heal poison ivy to chemicals in coral that may help cure cancer.



WHALE SHARKS

66 Ou want me to get in the water with that?" you ask, as a spotted 35-foot sea monster surges into view below your sub at Ningaloo Reef. It's a whale sharkwhich is not a whale, but rather the world's largest fish-and it's your mission to snap a close-up. "They look even bigger underwater,"

says Brad Norman, a whale shark researcher. You see what he means as you begin swimming beside the huge fish. The eyes swivel to watch you, but you're not afraid. Whale sharks would rather eat tiny plankton that they sift through their gills than munch on curious swimmers. Their skin is covered in white spots. You photograph the spots to accomplish your mission.

Back on the sub, Norman uploads your

picture to ECOCEAN, a conservation program that coordinates whale shark identification. The system analyzes the spots in your photo and tries to match them with pictures submitted by adventurous tourists from all over the world. "Each shark has a unique pattern of spots," Norman says. "It's like a fingerprint." The spot-matching system helps researchers track the fish's travels and monitor the species' overall health.

Every photo helps. Plankton-rich waters attract the elusive sharks, but they also spend many days in deeper water-far from cameras. By keeping tabs on the whale sharks through photos, scientists get crucial information about more than the sharks. "Because they feed on tiny prey and must find lots of it, this species could become an indicator of the health of our marine ecosystem," Norman says.

>>IM

- GO TO THAT WEB SITE FROM YESTERDAY AGAIN.
- TRACK WHALE SHARKS & KEEP EYE ON OCEAN HEALTH.
- HOW?
- EAT PLANKTON.
- UMMM...NO THANKS.
- NOT U! SHARKS. SICK SEA = PLANKTON GONE = NO FOOD FOR SHARKS.







MORE ABOUT



ARE THOSE LITTLE BRITTLE STARS HOLDING HANDS?

Nope. They are simply sitting on the top of a seamount (an under water mountain), snagging food as water flows by. Scientists off the coast of New Zealand found a "brittle star city" on top of a seamount almost 2.500 feet tall.



KEEP YOUR EYES PEELED.

The waters around Australia are home to one of the world's smallest fish. The stout infantfish is no longer than the width of a pencil and one of the smallest animals with a backbone on the planet.



THE BLOBFISH

looks more like a cartoon character than a fish. Its lazy strategy is probably simply to wait for something edible to swim by as it hangs out near the ocean floor.



SMALL BLUE-RINGED OCTOPUS

scurries along the ocean floor, looking for crabs to eat. It may be beautiful to look at, but stay away: The colorful creature contains enough venom to kill several humans.



FROM YOUR

you walk on beaches covered with seashells such as the conch. These shells are the exterior skeletons of soft-bodied animals called mollusks that grow inside. So make sure nothing is living in there when you pick up the shell!



EMPEROR PENGUINS

ou peer through the submersible's porthole at four-foot-long shapes shooting by like torpedoes a hundred feet below the Antarctic ice. They're emperor penguins—the largest penguins—and one suddenly darts up through the frigid water. It sees dinner!

Emperors cruise under the ice peering upward for fish. Once they spy a tasty-looking silhouette, they rocket up and grab the fish. Emperors are the deepest divers of the 17 penguin species. Although most dives are at depths of 600 feet or less, they can dive to nearly 1,000 feet and stay under for more than 20 minutes before surfacing for air.

You're ready to see these birds on land. Without dense penguin feathers to keep you warm when temperatures plummet to -30°F, you pile on six layers of cold-weather gear before heading ashore. The penguins and their chicks. "Close your eyes and listen," says Barbara Wienecke, seabird ecologist with the Australian Antarctic Division. "Penguins have a lot to say, and each has its own song."

These songs help pairs find each other after a winter apart. The father incubates the egg for two months while the mother When she returns, a chorus of squawks and peeps fills the air. "The calls are very melodic among all these penguin family reunions, you





444

MORE ABOUT



YOU CAN SEE A GRACEFUL NOSE-DIV

into the water, hunting for lunch. These birds spend most of their time in the air and water and have been known to go months without seeing land.



at the South Pole can dip to minus 100°F-so why isn't the ocean frozen solid? As currents carry cold water away, warmer water replaces it. Plus the sea ice on top of the ocean acts like a blanket, keeping the water temperature above freezing.



YOU'VE NEVER

spider like this in your garage. Found off the Antarctic coast, some sea spiders are bigger than a man's fist. But no worries: They eat coral and tiny tubelike creatures that live



- I'M AT BOTTOM OF WORLD!
- WHAT'S TO SEE THERE?
- EMPERORS!
- REALLY? THOUGHT THEY WERE IN ANCIENT CHINA OR SOMEWHERE.
- HAHA, PENGUINS.
- COOL! HOW R THEY?
- DOING OK. JUST NEED TO STOP GLOBAL WARMING S THEY KEEP THEIR ICE.



you see peeking out of the water is bigger than it looks. These humongous chunks of ice can be almost a thousand feet tall. But only about ten percent is visible above water.



A SAFE LEVEL of all the world's oceans depends on the

Antarctic ice sheet, the ice that covers Antarctica. If it were ever to melt, oceans would rise more than 200 feet.

SEA OTTERS

f the coral reef from earlier in the trip were a submerged city, then welcome to this underwater forest of kelp. As you pop up to the surface near the coast of North America, you find hundreds of sea otters bobbing on their backs around you. Some are snoozing. Some are grooming their thick fur. The otters wrap themselves in kelp or cling to neighbors to keep from drifting in the fierce current.

This behavior is called rafting. Sea otters sometimes gather in groups to socialize, rest, and watch out for each other. "If the otters on the outskirts of the raft become alert, the rest of the group will perk up, too," says biologist Angela Doroff.

The animals have reason to be wary. People once hunted sea otters to near extinction for their fur, the thickest of any animal. A sea otter has more hair per square inch than you do on your entire head. With protection, the otters are slowly recovering but still face threats that include climate change and predators. Orcas have become major sea otter predators in some areas. Scientists think orcas are finding fewer of their usual prey, seals and sea lions, and are adding otters to their menu.

Sea otter survival is vital to keeping a delicate balance in their sunken-forest habitat. Voracious eaters, sea otters have a taste for sea urchins, spiny creatures that would devour the kelp forest if the otters didn't keep them in check. You wish the otters luck as your sub sinks back into the emerald depths of the kelp.



- U STILL UNDER ICE 2DAY?
- NO. KELP FOREST W/SEA OTTERS.
- MY GREAT-GRANDMA HAD A SEA OTTER COAT!
- NOT OVERHUNTED BY PEOPLE
- ANYMORE, BUT ORCAS HUNT THEM MORE NOW. YOU ALMOST HOME?
- YEAH. 1 MORE STOP TO SEE
- WHALES.









GOOD THING YOUR SUBMERSIBLE

HAS GPS! The Pacific Ocean is the largest of all the world's oceans. It covers one-third of the Earth's surface. All the surface area of the world's dry land could fit inside the Pacific Ocean's surface area.



A TINY PACIFIC SEAHORSE

comes closer to check you out. Seahorses are unusual animals: Females produce the eggs, then males carry them and hatch them from their pouches.



A MORAY

EEL is peering at you, but you're too big for dinner. These snakelike fish hide in rocks or coral, then snap and grab at prey with two sets of powerful



YOUR SUB IS WAY COOL, but it can't reach the bottom

of the Pacific's Mariana Trench, believed to be the deepest spot of any ocean. It's so deep that only one manned submersible (left) has ever reached the bottom, nearly



found in all the world's oceans, but in some places, giant kelp can grow more than 100 feet tall. It can grow up to two feet a day, making it one of the fastest growing plants in the world.

BELUGAS

he last thing you expect to hear under floating slabs of Arctic ice is the chirping of a songbird. Whistles reverberating through your sub's hull cause you to look through the porthole. It's a **pod** of ghostly gray-and-white **beluga whales** swimming through the icy water. Sailors nicknamed these whales "sea canaries" for their birdlike songs. Belugas sing to communicate with other belugas.

Here, just a few hundred miles from the North Pole, even a quick dip in the icecovered water would be lethal for you. "But belugas are **superbly adapted** to the Arctic environment," says Roderick Hobbs, a scien-"Belugas are associated with ice much of their lives, and may depend on the ice cover

Unlike most dolphins and whales, belugas have flexible necks that let them crane their blowholes into ice cracks for air. They carry a six-inch layer of blubber in the coldest months. This fat offers insulation. and it streamlines their shape for easy swimming, much like the high-tech bathing suits worn by Olympic swimmers. "While adaptation," says Hobbs.

As you've seen all along on your under-water safari, pollution and global warming threaten the health of the ocean and all that live in it. Inspired to help any way you can, you the in it. Inspired to help any way you can you chart a course for home. Luckily, the belugas are going your way. Each winter they migrate south thousands of miles to stay on the fringes

>> I M

- WHAT KIND OF WHALES?
- BELUGAS.
- TOP OF WORLD?
- YEAH, GLOBAL WARMING COULD CAUSE SAME KIND OF PROBS AS AT BOTTOM.
- SEE U WHEN U GET HOME.
 WHOLE SCHOOL'S FOLLOWED
 UR TRIP. EVERYONE
 PROMISED TO EAT ONLY OK
 FISH ETC TO SAVE OCEAN.



777

MORE ABOUT



DARTING THROUGH the water like a jet plane, a ringed seal chases after its cod dinner. These seals spend most of their time in Arctic waters, occasionally staying under for up to 45 minutes. One survival secret: The seals blow bubbles before surfacing near ice to see if lurking predators such as polar bears will pounce.



IT MAY SEEM

BIG from your submersible, but the Arctic Ocean is Earth's smallest ocean. The surface area of more than 17 Arctic Oceans would fit into the surface area of the massive Pacific.



ARE THOSE

butterflies fluttering around you? Not really. Known as the "sea angel," the *Clione* is a kind of transparent sea slug with a winglike foot to help propel it through frigid



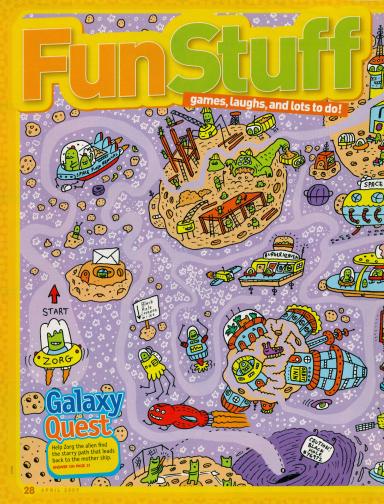
THOSE BIG WALRUSES

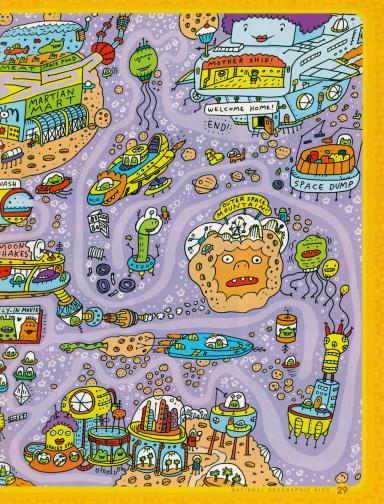
sunning on the shore may look slow, but they're surprisingly nimble in the icy Arctic Ocean. They need to be good swimmers to find enough food—walruses can eat 4,000 clams in one sitting.



BELUGAS EAT FISH, SQUID, CRAB, AND MORE.

SALT from our planet's oceans, loaded it into 30-gallon trash cans, and stacked the cans on top of one another, they would stretch to Pluto and back more than 1,000 times!





AWESOME OVALS

These photographs show views of oval shapes you may recognize. Unscramble the letters to identify what's in each picture. ANSWERS ON PAGE 31

Play interactive "What in the World?" and other games online. kids.nationalgeographic.com



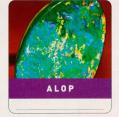
















Zone Sourin's

ABOVE THE CLOUDS

What would the world look like if you could fly? NG KIDS readers let their imaginations take flight in these airborne drawings.



Flying Over Rye
Catherine Turner, 9
Page New York





If We Could Fly
Madeline Wilberding, 13
Liberty Township, Ohio



Answers

Made in the words obd, Made row: whadow, running track, Rowfirult, Bothom row: opd, Rowfirult, Botho



Draw a COOL tOY that you would like to invent

Send your original drawings t NG KIDS—Toy Art Zone P.O. Box 98002 Washington, DC 20090-8002

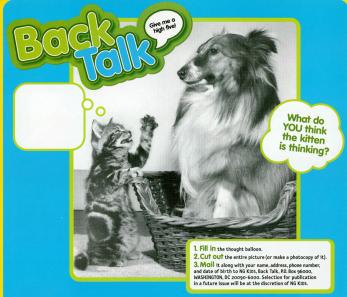
Include your name, address, phone number, date of birth, at life for your drawing, a statement that it is your own work, and the name of your parent or guardian. Your parent or guardian roust pign a rebase for publication of your illustration, submissions become the property of the National Ecopypain's Society, and all rights thereto are transferred to the National Ecopypain's the Control of the National Ecopypain's Society, and all rights thereto are transferred to the National Ecopypain's Society, and the National Ecopypain's Society Society, and the Natio



Brian Ling, 8

New York in the Sky
Joshua Simcoe, 11
Allentown, Pennsylvania







From the December/January Issue

You obviously don't understand the pecking order. Everett McNair, 12 Schodack Landing, New York

How many times do I have to tell you, this is not America's Next Top Model.

Annie Gonring, 12
Whitefish Bay, Wisconsin

Show 'em how the moonwalk's done, Bob.
Elijah Fabian, 9
Los Angeles, California

Hey, Happy Feet, get back in line! Cassidy O'Neal, 8 Fort Lauderdale, Florida Nobody told me this was a black-tie event. Zoey Henderson, 9 Wallisville, Texas

They will never make it past the flying test.
Megan Olsen, 12
Sherwood, Oregon

Did you guys swallow your necks?

your necks?
Brittany Hart, 11
Lee's Summit, Missouri

Simon didn't say get out of line. Andrew Marden, 10 Franklin Lakes, New Jersey